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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,249	12/22/2004	Evgeny Mikhailovich Dianov	CU-4032 RJS	9706

26530 7590 09/21/2005

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CHICAGO, IL 60604

EXAMINER
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BLEVINS, JERRY M

ART UNIT	PAPER NUMBER
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2883

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/519,249	<b>Applicant(s)</b> DIANOV ET AL.	
	<b>Examiner</b> Jerry Martin Blevins	<b>Art Unit</b> 2883	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 December 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>14 February 2005</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because Figures 1-3 and 7-9 are extremely dark making the various elements difficult to distinguish. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In the present instance, the abstract exceeds the maximum allowable limit of 150 words.

Appropriate correction is required.

***Double Patenting***

Applicant is advised that should claim 3 be found allowable, claim 7 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

In the present instance, claims 3 and 7 are identical.

Appropriate correction or cancellation of the duplicate claim is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent to Maroney et al., number 6,526,192 in view of Published European Patent Application to Sumitomo Electric Industries, number EP 0 851 247 A2, and in view of US Patent to Toyonaka et al, number 5,283,846.

Regarding independent claim 1, Maroney teaches a device for protecting a fiber line against destruction by laser radiation (Figure 3C and column 5, line 58 – column 6,

line 11), comprising a section of an optical fiber (14) having a core (in middle) with a constant diameter throughout the length of the section, and a cladding (top and bottom) of the optical fiber section. Maroney does not teach that the cladding has at least at one part, of length greater than or equal to 10 times the mode field diameter of the optical fiber section, a cross-section parameter (cross-sectional diameter of the cladding) greater than the mode field diameter but less than or equal to the minimum of 4 times the mode field diameter and 40 micrometers. Sumitomo teaches an optical fiber with mode field diameter about 8 micrometers (column 2, lines 29 and 30) and a cladding diameter between 25 and 40 micrometers (abstract). Therefore, Sumitomo teaches a range of cladding diameter (25 to 32 micrometers) which is greater than the mode field diameter but less than or equal to 4 times the mode field diameter (which is less than 40 micrometers). It would have been obvious to one of ordinary skill in the art at the time of the invention to add to Maroney the teaching of Sumitomo. Although the range of Sumitomo overlaps the indicated range of the claim, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. The motivation would have been improve fiber protection by defocusing the radiation in the fiber (Maroney, column 5, lines 48-58). Toyonaka teaches an optical fiber with constant core diameter and cladding, where the fiber length is 50 cm and the mode field diameter is 8 micrometers. Therefore, Toyonaka teaches the indicated length range of the claim. It would have been obvious to one of ordinary skill in the art at the time of the invention to add to Maroney the teaching of Toyonaka. The motivation would have been to

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improve fiber protection by defocusing the radiation in the fiber (Maroney, column 5, lines 48-58).

Regarding claim 2, Maroney in view of Sumitomo and Toyonaka teaches the limitations of the base claim 1. Maroney does not teach that the optical fiber cladding is made of silica based glass. Sumitomo teaches an optical fiber cladding made of silica based glass (column 3, lines 34-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to add to Maroney the teaching of Sumitomo. The motivation would have been to improve fiber protection (Maroney, column 5, lines 48-58).

Regarding claim 5, Maroney in view of Sumitomo and Toyonaka teaches the limitations of the base claim 1. Maroney in view of Sumitomo and Toyonaka also teach a core having constant diameter throughout the length of the section, and a cladding diameter of the optical fiber section, at least at one part of length greater than 10 times the mode field diameter, of the optical fiber section being greater than the mode field diameter but less than or equal to the minimum of 4 times the mode field diameter and 40 micrometers, as indicated in the rejection of base claim 1 above. Although Maroney teaches a fiber diameter, which would suggest that the fiber is cylindrical, Maroney does not explicitly teach that the optical fiber section is cylindrical. Sumitomo teaches a cylindrical fiber section (Figure 1). It would have been obvious to one of ordinary skill in the art at the time of the invention to add to Maroney the teaching of Sumitomo. The motivation would have been to improve coupling to a cylindrical fiber being protected.

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Regarding claims 3, 4, 6, and 7, Maroney in view of Sumitomo and Toyonaka teaches the limitations of the base claims 1 and 5. Maroney also teaches that the optical fiber section is formed directly in the fiber line to be protected and is included into the fiber line to be protected by splicing (Figure 3C and column 5, line 58 – column 6, line 11).

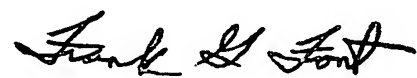
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Martin Blevins whose telephone number is 571-272-8581. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMB



Frank G. Font  
Supervisory Patent Examiner  
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